

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 January 2006 (12.01.2006)

PCT

(10) International Publication Number
WO 2006/004258 A1

- (51) International Patent Classification⁷: **C09K 3/14**
- (21) International Application Number:
PCT/KR2005/000859
- (22) International Filing Date: 24 March 2005 (24.03.2005)
- (25) Filing Language: Korean
- (26) Publication Language: English
- (30) Priority Data:
10-2004-0021258 29 March 2004 (29.03.2004) KR
- (71) Applicant (for all designated States except US): **HAN-WHA CHEMICAL CORPORATION** [KR/KR]; 1 Janggyo-Dong, Jung-Ku, Seoul 101-797 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **NAM, Ho-Seong** [KR/KR]; 108-501, Daerim Dure APT, Shinseong-Dong, Yuseong-Ku, Daejeon-City 305-720 (KR). **LEE, Jin-Seo** [KR/KR]; 108-1204, Daerim Dure APT, Shinseong-Dong, Yuseong-Ku, Daejeon-City 305-720 (KR). **AHN, Gui-Ryong** [KR/KR]; 107-702, Sanga APT, Mannyeon-Dong, Seo-Gu, Daejeon-City 302-739 (KR).
- (74) Agents: **KWON, Oh-Sig** et al.; 401 Joeeun Leaderstel, 921 Dunsan-Dong, Seo-Gu, Daejeon-City 302-828 (KR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CHEMICAL MECHANICAL POLISHING SLURRY COMPOSITION FOR SHALLOW TRENCH ISOLATION PROCESS OF SEMICONDUCTOR

(57) Abstract: The present invention is related to a chemical-mechanical polishing slurry for shallow trench isolation, more concretely, to a chemical-mechanical polishing slurry comprising an aqueous abrasive solution comprised of deionized water, polishing particles, and a polishing particle dispersant; and an aqueous additive solution comprised of a carboxylic acid polymer compound, a nitrogen-containing organic cyclic compound, and an amine-group compound. The removal selectivity of the slurry may be improved by significantly lowering the speed of polishing of nitride film by adding a nitrogen-containing organic cyclic compound to an acrylic acid polymer compound, and by increasing the speed of removal of silicon oxide film by adding an amine-group compound, which is an accelerator of hydrolysis of silicon oxide film.



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